

Tree Country

August 2017



the employee
newsletter of the
**South Carolina
Forestry Commission**

INSIDE THIS ISSUE



Personnel on Western Fire Assignment
Page 4



Geocaching on Harbison State Forest
Page 8



Employee Spotlight: AJ Rabon
Page 20

from the desk of
STATE FORESTER
Gene Kodama



Good day,
I hope everyone's summer is going well, and time is being spent on some vacations and visits with family and friends. Here we are in August already with the summer season already winding down and fall planning in the works. During July, we spent quite a bit of time working on the "Development" portion of our "Protect and Develop the Resource" mission.

South Carolina was recently blessed to have the Roseburg Forest Products company announce that they would be investing in a major manufacturing facility in Chester County.

I was familiar with this company from earlier days in my career when I visited one of their mills and their forest operations in Oregon. This company is a family owned company with a fantastic reputation across the country. Their first engineered lumber manufacturing facility's arrival on the east coast in our state will be a much welcomed development. This mill will be added to the 729 secondary mills that already call South Carolina home.

These mills make "value-added" finished products from the products made by primary mills like pulp and paper, sawmilling, and veneer mills. In this case, the company will use veneer to make "Mass Timbers" called laminated veneer lumber (LVL) that can be up to 40 to 60 feet long. Roseburg will be a wonderful corporate citizen, and we are happy they have chosen our state for their first east coast investment. Please see the article herein on this good news.

Tim Adams, our Forest Resource Development Director, and I also met this past month with our SC Department of Commerce team to renew our Memorandum of

Understanding (MOU) that delineates how we will work together. The Commission provides funding to the Department to have personnel dedicated to helping our forest industry grow.

We also attend trade shows together to attract manufacturing to our state and work closely together to recruit new industry and help existing industry to expand. The fruits of our state's forest community development efforts are coming to fruition with the continued growth of the industry.

This was clearly shown by the industry exceeding the 20/15 SC Forestry Project goal of reaching a \$20 billion economic impact by year 2015 and actually reaching \$21 billion. And, the best is still yet to come with state timber resources at record levels, and the economy and housing construction continuing to grow.

As evidence of even more cooperatives and partnering success, we met last week with our Clemson University Public Services Activities (PSA) and forestry department friends to renew our MOU with PSA and plan work for this coming year. The MOU is designed to outline the types of work to be done



LVLs can be used to make beams, as in this construction.

by the Commission versus PSA so that state funding and our efforts are coordinated and work is not duplicated. In summary, PSA focuses on forest research and extension of knowledge to forest landowners at the group level. The Forestry Commission focuses on supporting forest landowners at the individual level. This approach ensures efficient use of state funds and staffing to best serve all South Carolinians.

So, we are having a busy but very productive summer with much to do before the fall starts. But, that will be another story to tell.

Best regards,



On the Cover

The cover photo features the Wilkes Chapel Field on Sand Hills State Forest. It is planted in sunflowers and other crops for the upcoming WMA dove hunts.

State Forester Gene Kodama visited Table Rock in July to see how the area was recuperating from the Pinnacle Mountain Fire. From Highway 11 not much damage can be seen.

Employee News

New Employees

We would like to welcome three employees who joined the agency in July.

Kristine “Kris” Anderson joined the Human Resources Office as the Benefits Manager June 2. Kris lives in Leesville but grew up in the Midwest. She attended Northeastern Oklahoma A&M and SW Missouri State University. Kris transferred from the SC Department of Corrections’ Human Resources Office. She worked in the hospitality industry for several years before joining SCDC in 2010. In her spare time, she enjoys traveling, spending time with her family, watching her son play football, and doing 5Ks like the Hero’s Run in Charleston and Susan Komen Walk.



Kris Anderson



Donna French

Donna French is the new Coastal Dispatcher. She started July 17. Donna lives in Walterboro and attended the University of South Carolina. She was previously a property manager.

Colton Webb is the new Forestry Technician for the Abbeville/Greenwood/Laurens sector. Colton started July 17 and lives in Cross Hill. He attended Golden Acres School in Jacksonville, N.C. Colton has several years’ experience logging and doing site prep work.



Colton Webb

Personnel News

Calhoun/Orangeburg Project Forester **Walter Whetstone** resigned from his position effective June 28.

Georgetown/Williamsburg Project Forester **Wes Brunson** resigned effective July 27.



Law Enforcement Chief Tommy Mills swore in the new Cherokee/Chester/York Sector Supervisor Matt Gordon June 13 as a SCFC law enforcement officer.

PEE DEE TRAINING



Darlington/Marlboro Supervisor Shawn Feldner teaches the classroom portion of fire track training for the Pee Dee Region July 24.



Dillon/Florence Supervisor Anthony Eaddy demonstrates how to turn the pump on the fire track.



Anthony shows how to lift the cab to get to the fluids on the fire track.



Lynches River Forest Technician Johnnie Iseman, Project Forester Donnie McDaniel, Forest Technician Derrick Spivey, and Black River Unit Forester Ron Holt check out the track distance.



Lynches River Forest Technician Paul Branch, Fire Warden Roger Nesbitt, and Forest Technician Whit Player pay close attention to Anthony's instructions.

Personnel Deployed on Fire Assignment Out West

The Western wildfires are going full steam right now. We had our first out-of-state deployments July 18. Eleven SCFC personnel and one fire service personnel were sent to Utah as part of a Type 2 Initial Attack Hand Crew. This crew will primarily put in firebreaks with hand tools. We also had a single resource go to Montana as a Heavy Equipment Boss and a Task Force Leader go to California.

The hand crew was assigned to the Toulon Fire in Nevada July 24 and safely returned Aug. 5.

No equipment has been sent out at this time. A great website to check on the wildfires around the country is: <http://inciweb.nwcg.gov/>.



Before deploying from Columbia, State Forester Gene Kodama, Protection Chief Darryl Jones and Deputy State Forester Tom Patton thanked personnel for their service and reminded them of the need to keep safety in the top of their mind.



Jacqueline Forsyth loading bags on the airplane.



The 12 members of the Type 2 Initial Attack Hand Crew before deployment to Utah: Mike Wooten, James Hall, Tyler Greiner, GraceAnnaSchilz, AJ Rabon, Clay Cooper, Jacob Schimpf, Jacqueline Forsyth, Tim Hunt, Matthew Waldroup (Fire Service), Ben Kendall, and Michael McGill.



Clay Cooper, Tyler Greiner, Mike Wooten, and GraceAnna Schilz with their hand tools.



The crew takes a break in the rocky terrain.

TREE JOKES

Where do saplings go to learn?

Elementree school.

Why do trees make great thieves?

Sticky fingers.

What is a triangle palm's favorite school subject?

Treigonometree.



SC Exotic Pest Plant Council Meeting Coming Up

The South Carolina Exotic Pest Plant Council (SCEPPC) will hold its annual meeting at the Harbison State Forest Environmental Education Center Sept. 27. The event runs from 9:30 a.m. - 3:00 p.m.

Participants will learn about invasive plants that impact our forests and aquatic environments, and be able to share their experiences in dealing with them.

Forest Health has funds to pay for the SCEPPC registration fees of three employees from each region. If you would like to attend, contact David Jenkins at (803) 896-8838 or djenkins@scfc.gov.

Visit the SCEPPC Meeting website to register: <https://www.eventbrite.com/e/sc-exotic-pest-plant-council-meeting-tickets-35964346328>.

Roseburg Forest Products to Construct Plant in Chester

Oregon-based Roseburg Forest Products will expand its operations in the southeastern United States with construction of a new engineered wood products plant in Chester, S.C.

"This is an exciting strategic growth opportunity in a business that has done well for us," Roseburg President and CEO Grady Mulbery said. "With the continued increase in housing starts in the southeastern U.S., we see ongoing demand growth for engineered wood products in the region and elsewhere. We are grateful to state and local officials in Chester for their hard work and collaborative efforts to facilitate this project."

Groundbreaking on the planned state-of-the-art manufacturing facility is expected in early 2018, with anticipated operation start-up in mid-2019. Once completed, the plant will create 148 full-time jobs. "This new plant will be the most technologically advanced manufacturing facility of its kind in the world with the highest capacity continuous Laminated Veneer Lumber (LVL) press in the world," said Steve Killgore, Roseburg's Senior Vice President of Solid Wood Business. "Expanding our manufacturing capacity in this way allows us to meet growing customer demand for a versatile product that combines the best of modern processing technology and structural capability."

The new plant will make Roseburg the largest U.S. manufacturer of engineered wood products serving independent distributors without captive distribution. Roseburg first established its engineered wood products business



State Forester Gene Kodama and Forest Resource Director Tim Adams helped welcome Roseburg Forest Products to Chester, SC July 11. Gene (far right) stands with Roseburg Forest Products Senior Vice President Steve Killgore, Chester County Supervisor Shane Stuart, and SC Secretary of Commerce Bobby Hitt from left to right.

in 2001 and currently manufactures RFPI® Joists, RigidLam® LVL and RigidRim® rimboard at its plant in Riddle, Ore.

"Engineered wood products are a key strategic focus for Roseburg, and we have been looking for an opportunity to expand our footprint into the southeastern area of the country for a while now," Killgore said. "Our products have an established customer base across the country, and this new build will add production closer to those customers, in a region with a welcoming business environment and favorable raw materials costs." A significant percentage of Roseburg's engineered wood customers are located in the southeastern portion of the country. The greenfield project will provide current and new customers access to a stable supply of high-quality LVL product.

Roseburg did extensive research prior to choosing a location for the new plant,

with criteria including market demand, raw materials availability and cost, and business climate front and center.

"We have enjoyed close collaboration with state and local officials in Chester County to design a project that can deliver positive results for everyone involved," Killgore said. "Roseburg is grateful to the state and county for their hard work, and we look forward to a business relationship that contributes to the local and regional economy for many years to come." Roseburg plans to close on the property within the next 30 days. The project is contingent upon resolving terms and conditions with local and state officials, finalizing agreements and receiving approval of permits.

To learn more about the company please visit www.Roseburg.com.

Programs

EEASC Holds Invasive Species Class at Harbison

Many of us are not aware of the threat invasive species pose to our native ecosystems, particularly our forests. To celebrate National Invasive Species Awareness Week, the Environmental Education Association of South Carolina (EEASC) sponsored an invasive species class titled Campus Invaders which was held at Harbison State Forest Environmental Education Center July 12.

Educators from all over the state attended the training where they learned to identify important invasive species and did fun activities they can bring to their classrooms. They also learned how to study and manage invasive species in outdoor classrooms.

Forest Health Coordinator David Jenkins gave an informative presentation and led an educational forest hike. Fortunately, only four invasive species were found during the walk through Harbison! Participants were very engaged and had numerous questions for Jenkins about invasives around their schools and homes.

Education Coordinator Matthew Schnabel lead a "Forest Invaders" Project Learning Tree activity from the Focus on Forests guide. EEASC members conducted research to find out how invasive species affect their local forest and presented different methods of controlling them. Participants received hands-on experience with what makes invasive species a problem for forest ecosystems.

We often move these invaders unknowingly. An example would be when we move firewood that is infested with pests or diseases to other forests.

Participants learned that many of the invaders are bought and sold at nurseries! Bradford Pear is one example that many people plant for its vase-like shape and red fall foliage. Or the tallow tree, whose virtues Benjamin Franklin



Forest Health Coordinator David Jenkins gets attendees to investigate invasive species in an activity.



Fifteen educators including school teachers and home schoolers learned about invasive species in South Carolina.



Assistant Environmental Education Coordinator Beth Foley and Forest Health Coordinator David Jenkins participate in an activity to create "Wanted" posters of invasive species in the Forest Invaders activity.

Forest Health

- David Jenkins and Beth Foley



David Jenkins talks about the dangers of Japanese climbing ferns.

extolled as a commercial source of tallow. Both of these are invaders in the southeastern United States, competing with native flora and altering the ecosystem.

Programs

Tree Farmer Books Presented in Georgetown County

Black River Unit Forester Ron Holt recently presented two Georgetown County libraries with *The Tree Farmer* books as a part of the Georgetown Library System's summer reading program.

Ron presented books and did a program for 12 children at the Georgetown Main Library with Alexander Barfield, an intern from International Paper, June 20. He presented books to Carver's Bay Branch Library and did the program with 80 kids June 19. The books were donated by the local Winyah Chapter of the Society of American Foresters (SAF).

Education Coordinator Matt Schnabel put together a program to present to the children with the books. Ron read the book to the children and then played a game with them using colored chips. The different color chips represent different needs such as blue is water, white is sunlight, and red chips are nutrients. The kids are spread in rows and the chips are scattered. They bend down and race to pick up what they need. If they didn't get all three colors, they get weak and may die. They are put at a close spacing and a wide spacing and asked to see what the



Black River Unit Forester Ron Holt presented *The Tree Farmer* books to the Georgetown Main Library with Alexander Barfield, an intern from International Paper.

difference was in the amount of chips they gathered. They were also "thinned" to show how this creates more room, less competition, and may help prevent a disease from spreading.

Belle W. Baruch Foundation Executive Director George Chastain and other foresters in the area volunteered to read at other local library branches.

Pee Dee Region

- Ron Holt



Ron also presented books to Carver's Bay Branch Library.

NO PUN INTENDED...

Stealing someone's coffee is called mugging.

The other day I held the door open for a clown. It was a nice jester.

Pasteurize: Too far to see.



Programs

Harbison Offers Geocaching As Part of 90th Anniversary

In recognition of the South Carolina Forestry Commission's 90th anniversary, Harbison State Forest created a geocaching course! Geocaching is a great family-friendly activity for all ages to get outside and explore our beautiful forests. The purpose of this course is to educate the public about the South Carolina Forestry Commission and the importance of forestry in our state.

The course follows the established 0.7 mile "Learning Trail" and 0.5 mile "Discovery Trail" which both start at the Harbison Environmental Education Center.

There are seven individual geocaches hidden along this trail, which can be found in 50-caliber ammo boxes. Each cache contains a log book and information regarding the divisions and duties within the Forestry Commission. There is an accompanying set of seven questions (one for each cache) that can be completed and turned into the Environmental Education Center. Those who answer all seven questions correctly will receive a commemorative SCFC 90th anniversary coin!

The coordinates for the caches can be found on Geocaching.com or on the downloadable answer sheet. The answer sheet can be found at <http://www.state.sc.us/forest/docs/hsfgeocachinganswersheet.pdf> or picked up from the education center. If you have any questions or would like more information, please call Beth Foley at (803) 896-8855 or email at BFoley@scfc.gov.



Education Coordinator Matt Schnabel puts the geocache boxes out on the forest.



One of the seven geocache locations on Harbison State Forest.

Education

- Beth Foley



Within 2 hours of the geocache trail being published on Geocaching.com, we had our first participant complete the challenge!

"Surprised to see seven new geocaches less than two miles from home. What a great Coin Trail at Harbison State Forest. With an education in every one, and an awesome coin for the effort. Cool way to commemorate South Carolina Forestry Commission's 90 year Anniversary. I really appreciate the effort and planning creating this Coin Trail Challenge. Thanks bfoley1 for placing and maintaining this cache for all to find."

Genomac1



The seven geocache boxes before they were hidden on Harbison.

Caught ON Camera



Edgefield/McCormick/Saluda Project Forester Henry Hutto attended the USFS sawyer class S-212 at Francis Marion National Forest May 25 in Awendaw. Also attending were Abbeville/Greenwood/Laurens Supervisor Dale Curry, Jasper/Beaufort Sector Forest Technician Scotty Harrington, Dillon/Florence Sector Forest Technician Kody McNeil, and Georgetown/Williamsburg Project Forester Wes Brunson. The class teaches proper techniques and safety in the use of chain saws and axes. While out in the woods, a small alligator was found and released in a different area from the class.



Members of the Incident Management Team received recognition for their assistance with the 2017 State Fire Association Conference. Incident Commander Mike Bozzo presented the certificates July 26 to all IMT members who worked the event. Cathy Nordeen and Kip Terry were two of the many who received certificates.



BMP Coordinator Herb Nicholson gives a BMP update at the National Council of Air and Stream Improvement (NCASI) Southern Region Meeting in Greenville June 13.



Coastal Stewardship Forester Vaughan Spearman shows Coastal Regional Forester Calvin Bailey a Reishi fungi in the regional office parking lot. (See page 13 for information on Reishi.)

More Trees for Less Runoff

It should go without saying that trees absorb stormwater a lot better than, say, a parking lot. But up until now, the city of Charleston hasn't had much concrete data on tree coverage or the ability to link that data to flooding and stormwater drainage.

That will soon change, thanks to an ongoing study funded by a grant from the Green Infrastructure Consortium that will take stock of Charleston's tree canopy coverage and offer insight into how more trees could improve drainage.

And obviously, flooding and drainage are of paramount concern for a low-lying city faced with the challenge of rising seas.

Charleston is taking that problem seriously, investing hundreds of millions of dollars in infrastructure improvements that will, among other things, help pump water out of critical flooding areas during rainstorms and high tides. Those are needed investments.

But trees offer a decidedly low-tech - and affordable - solution to stormwater management. That's because every part of a tree helps keep water off the ground during rain. It gets caught in leaves, absorbed into bark and soaked up by roots. A process called evapotranspiration sucks up water and releases it back into the air.

Trees can also help prevent chemicals and bacteria from reaching local waterways, which is a crucial function in the Lowcountry given that a recent investigation found potentially harmful levels of certain bacteria in Charleston area creeks and rivers after rains. More trees would provide a higher level of water quality.

And trees provide plenty of other benefits like cleaner air and aesthetic value.

City officials hope to use data from the tree study to consider potential



A drain on Market Street can't keep up with the heavy rainfall flooding downtown streets in Charleston.

changes to the zoning code that might incentivize developments to leave more trees intact or plant new ones. The idea certainly warrants discussion as the area copes with rapid growth and plans for its future.

As Charleston works toward solving existing flooding and drainage issues and prepares for a future of higher sea levels, trees could be a low-cost, high-impact way to help keep the city drier. That's a potentially useful tool worth exploring.

In fact, the city's exploration of trees as a solution for stormwater and flooding problems ought to serve as a model for other coastal communities that struggle with similar challenges.

And even on a sunny day, who wouldn't appreciate a little extra shade?

Reprinted with permission from Post & Courier, June 30
http://www.postandcourier.com/opinion/editorials/more-trees-for-less-runoff/article_7fae63a2-5b69-11e7-84b3-c7718b68a58b.html#comments

<http://www.charleston-sc.gov/TreesToOffsetWater>

Urban

- Russell Hubright



Karen Firehock of GIC with Coastal Urban Forester Frances Waite, who wrote the grant to fund the project.

NOTE: Project partners include the City of Charleston, the South Carolina Forestry Commission and the Green Infrastructure Center (GIC). The project is funded by the SC Forestry Commission under a grant from the USDA Forest Service and matched in-kind through participation by the city. GIC is providing the technical support and project management.

Around the state



Center for Heirs' Property Sponsors Landowner Symposium

Several Forestry Commission foresters participated in a landowner symposium sponsored by the Center for Heirs' Property Preservation June 22-23 at Voorhees College in Denmark. During the three breakout sessions, Regional Forester Calvin Bailey and Forest Management Chief Russell Hubright gave an overview of the services that the Forestry Commission provides to landowners. Russell also participated in a panel discussion titled "Forestry and the Future for the Historically Underserved Landowner."

Coastal Stewardship Forester Vaughan Spearman gave a presentation on herbal medicine of the Gullah culture. Santee Unit Forester Anetta Pritchard, Edisto Unit Forester Pete Stuckey, and Aiken/Bamberg/Barnwell Project Forester Robert Lord answered questions from the nearly 200 landowners who attended the event.

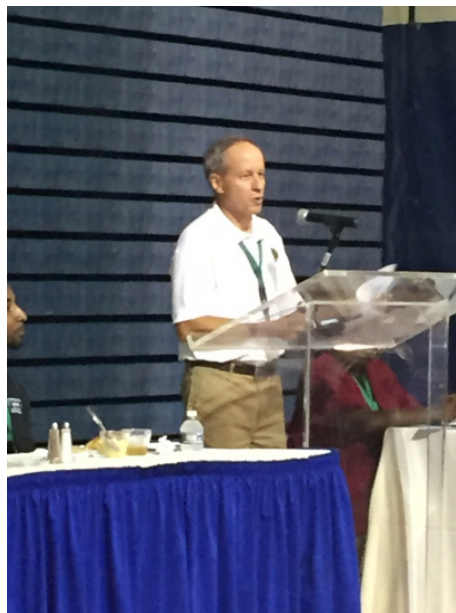
To learn more about the work of the Center for Heirs' Property Preservation, go to <http://www.heirsproperty.org>.

Forest Management

- Russell Hubright



Santee Unit Forester Anetta Pritchard answers a landowner's question as Aiken/Bamberg/Barnwell Project Forester Robert Lord and Edisto Unit Forester Pete Stuckey wait to assist landowners.



Forest Management Chief Russell Hubright participates in a panel discussion on forestry for the underserved landowners.



Coastal Stewardship Forester Vaughan Spearman presented traditional Gullah medicinal remedies.



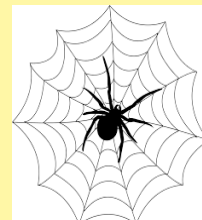
Coastal Regional Forester Calvin Bailey gives an overview of the Commission's services.

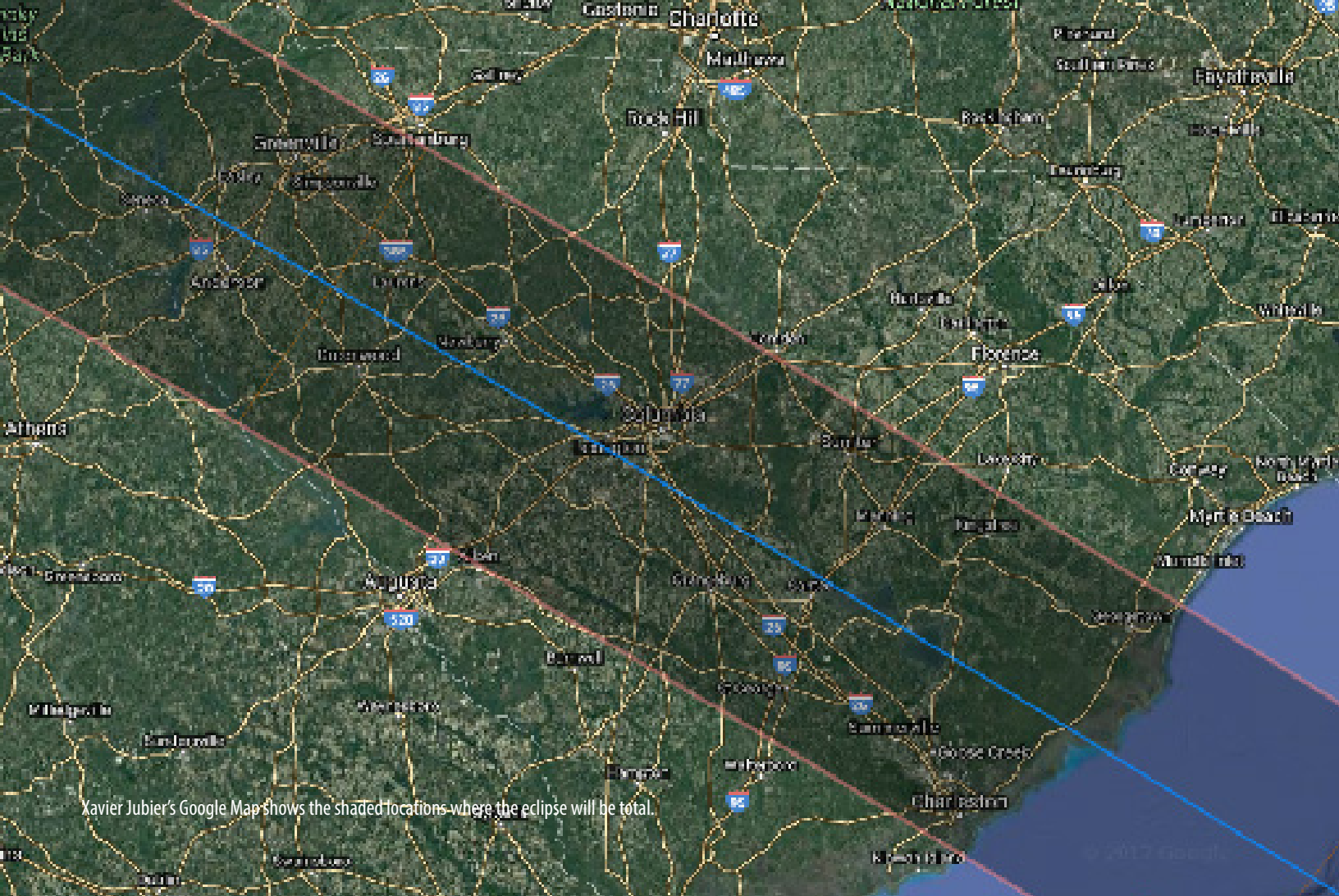
Did You Know?

Lemon juice can be used to clean glass and remove stains from aluminum, clothes, and porcelain.

If a honeybee keeps waggle dancing in favor of an unpopular nesting site, other workers headbutt her to help the colony reach a consensus.

A single strand of spider silk is thinner than a human hair, but also five times stronger than steel of the same width.





How to View the 2017 Solar Eclipse Safely

A solar eclipse occurs when the moon blocks any part of the sun. On Monday, August 21, 2017, a solar eclipse will be visible (weather permitting) across all of North America. The whole continent will experience a partial eclipse lasting two to three hours. Halfway through the event, anyone within a roughly 70-mile-wide path from Oregon to South Carolina will experience a brief total eclipse, when the moon completely blocks the sun's bright face for up to 2 minutes 40 seconds, turning day into night and making visible the otherwise hidden solar corona — the sun's outer atmosphere — one of nature's most awesome sights. Bright stars and planets will become visible as well.

The event has been described as the "Great American Eclipse," as it will be visible in totality only within a band across the entire contiguous United States. A total eclipse of the sun that passes from coast to coast has not occurred in the U.S. since 1918, and

such an event will not happen again at this scale until 2045.

This eclipse is a rare and striking phenomenon you won't want to miss, but you must carefully follow safety procedures. Don't let the requisite warnings scare you away from witnessing this singular spectacle! **You can experience the eclipse safely, but it is vital that you protect your eyes at all times with the proper solar filters.** No matter what recommended technique you use, do not stare continuously at the sun. Take breaks and give your eyes a rest! Do not use sunglasses: they don't offer your eyes sufficient protection.

Looking directly at the sun is unsafe except during the brief total phase of a solar eclipse ("totality"), when the moon entirely blocks the Sun's bright face, which will happen only within the narrow path of totality. To find out whether your home or any other specific location is within the path, see Xavier Jubier's Google Map ([http://xjubier.](http://xjubier.free.fr/en/site_pages/solar_eclipses/TSE_2017_GoogleMapFull.html)

[free.fr/en/site_pages/solar_eclipses/TSE_2017_GoogleMapFull.html](http://xjubier.free.fr/en/site_pages/solar_eclipses/TSE_2017_GoogleMapFull.html)), which supports zooming in to street level.

The only safe way to look directly at the uneclipsed or partially eclipsed Sun is through special-purpose solar filters, such as "eclipse glasses" or handheld solar viewers. Homemade filters or ordinary sunglasses, even very dark ones, are not safe for looking at the Sun. **Make sure the glasses you buy are certified to meet the ISO 12312-2 international standard.**

Instructions for safe use of solar filters/viewers:

- Always inspect your solar filter before use; if scratched or damaged, discard it. Read and follow any instructions printed on or packaged with the filter. Always supervise children using solar filters.
- Stand still and cover your eyes with your eclipse glasses or solar viewer

(continued next page)

before looking up at the bright Sun. After glancing at the Sun, turn away and remove your filter — do not remove it while looking at the Sun.

- Do not look at the uneclipsed or partially eclipsed Sun through an unfiltered camera, telescope, binoculars, or other optical device. Similarly, do not look at the Sun through a camera, a telescope, binoculars, or any other optical device while using your eclipse glasses or handheld solar viewer - the concentrated solar rays will damage the filter and enter your eye(s), causing serious injury. Seek expert advice from an astronomer before using a solar filter with a camera, a telescope, binoculars, or any other

optical device.

- If you are within the path of totality, remove your solar filter only when the Moon completely covers the Sun's bright face and it suddenly gets quite dark. Experience totality, then, as soon as the bright Sun begins to reappear, replace your solar viewer to glance at the remaining partial phases.

A solar eclipse is one of nature's grandest spectacles. By following these simple rules, you can safely enjoy the view and be rewarded with memories to last a lifetime.

This safety information has been endorsed by the American Astronomical Society, the American Academy of Ophthalmology, the National Aeronautics and Space

Administration, the American Academy of Optometry, the American Optometric Association, and the National Science Foundation.

<https://eclipse.aas.org/eye-safety/safe-viewing>

There are several events planned around the state. State parks will also hold events and have viewing glasses for sale. Visit: <http://southcarolinaparks.com/files/State%20Parks%20Files/Z%20-Other/2017-Eclipse-Events-FINAL.pdf>.



Reishi Fungi Possibly Used to Treat Some Cancers

The Reishi mushroom is well known for its anti-cancer effects. Reishi mushroom is a fungus that some people describe as “tough” and “woody” with a bitter taste. The fruiting body (above-ground part) and mycelium (filaments connecting a group of mushrooms) are used as medicine.

Reishi is a *Ganoderma* used for boosting the immune system and treating or resisting viral infections such as the flu; lung conditions including asthma and bronchitis; heart disease and contributing conditions such as high blood pressure and high cholesterol; kidney disease; cancer; and liver disease. It is also used in the treatment of HIV/AIDS, altitude sickness, chronic fatigue syndrome (CFS), insomnia, stomach ulcers, poisoning, and herpes pain. Other uses include reducing stress and preventing fatigue. This *Ganoderma lucidum* has anti-oxidative effects when supplemented. It also has a therapeutic effect on insulin resistance, reduces the risk of prostate cancer, and can help treat a variety of conditions associated with metabolic syndrome.



This Reishi mushroom was found on a tree in the Coastal Regional office parking lot.

Though further research is needed to confirm, *Ganoderma lucidum* also shows promise for a wide variety of cancer-related therapies.

<http://www.reishi.com/what-is-reishi.htm>



The beautiful Crater Lake National Park in Oregon is the deepest lake in the US at over 1,900 feet.



Ron stopped at the Logging Museum near Klamath Falls, Oregon.



Ron stands in front of a redwood at Humboldt Redwood State Park.



Ron and wife Deidra in the Trees of Mystery saw Paul Bunyan and Babe the Blue Ox along the Avenue of Giants.



Ron drives through a tree along the Avenue of the Giants in northern California.

Holt's Beautiful Vacation Out West

Black River Unit Forester Ron Holt recently went out West on a two-week vacation with his wife Deidra and some friends. He flew to Colorado and then took a train to San Francisco before getting a car and driving up through northern California to Washington and Oregon June 12-24.

Ron had a great experience seeing the big redwoods on the Avenue of the Giants on a northern California scenic highway that runs through Humboldt Redwood State Park. He also visited the Logging Museum and the Siskiyou Smokejumper Museum in Oregon.

These are just a few of the pictures he took.

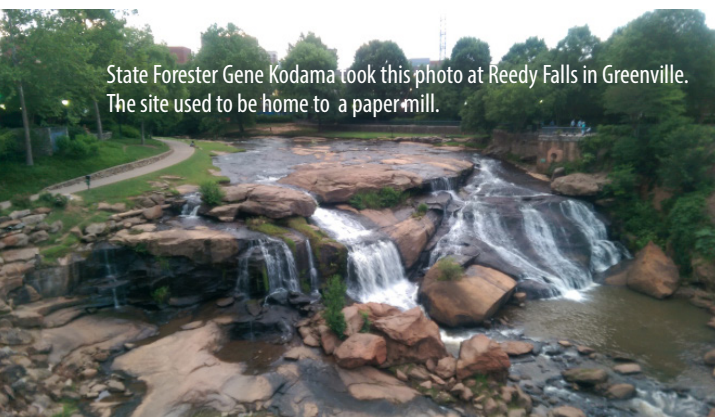
Caught ON Camera



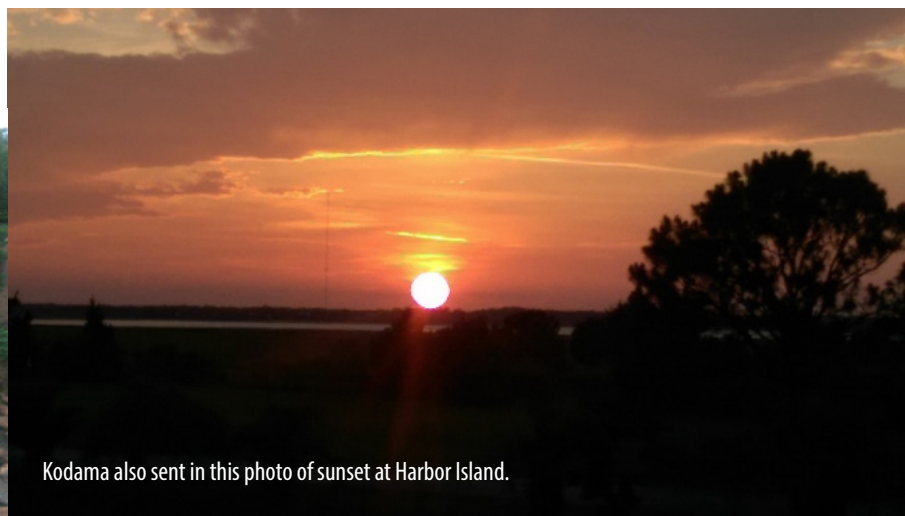
This cloud irisation was seen over Lake Murray June 25. Irisation or iridescence is the appearance of colors on clouds caused by sunlight being diffracted in clouds. It appears sometimes mingled, and sometimes in the form of bands nearly parallel to the margin of the clouds. It is a type of photometeor. The colors are often brilliant and mingled together. Green and pink occur most often, and in pastel shades.



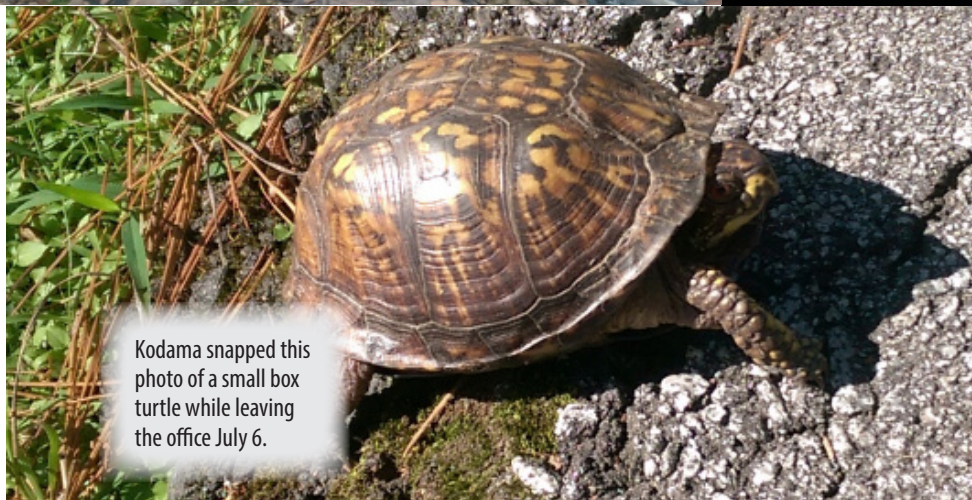
Piedmont Regional Forester Mike Bozzo sent in this old photo of Table Rock in 1915 showing the results of yearly burning and cattle grazing.



State Forester Gene Kodama took this photo at Reedy Falls in Greenville. The site used to be home to a paper mill.



Kodama also sent in this photo of sunset at Harbor Island.



Kodama snapped this photo of a small box turtle while leaving the office July 6.



This dagger moth was found in Charleston County.

FOR YOUR SAFETY

Wildland Firefighter Heat-Related Injury Prevention and Awareness

The wildland firefighter community has experienced an alarming increase in heat-related and other physiological injuries in the last few months. Heat related injuries and Rhabdomyolysis are not the same, but can occur at the same time.

Working in the current and predicted weather conditions, regardless of hydration frequency, type and volume, resources will be exposed to an environment where they are at a much higher risk for severe and extreme heat related illnesses. Firefighters unable to offload the heat produced by their working muscles will see an increase in internal temperature, and can quickly reach critical levels, even death!

We need to consider alternatives to meet objectives that minimize time exposed to the extreme conditions. Bottom line! Therefore, the following information should be shared with ALL personnel working in this extreme heat! All resources, IMTs and Fire Managers should understand the signs and symptoms of heat-related injuries and Rhabdomyolysis, be able to assess their risk within their assigned incidents and tasks, and understand their responsibility to mitigate exposure to the extreme heat.

Risks associated with Heat-Related Illness:

- **Physical work is the biggest producer of body heat.** Physical exertion at the start of work shifts sets the body's core temperature for the day. Air temperature generally increases from the beginning of normal shift work, thus giving little opportunity to lower body core temperature.
- **Hydration alone will not prevent a heat-related injury.** Hydration must be combined with good physical fitness and adequate recovery time from physical tasks in order to reduce the likelihood of heat-related injuries.
- Performing physical tasks, such as hiking up hills, as well as PPE weight (including tools and packs) contributes to high physical demands and thus higher body temperatures - to possibly near-critical levels.
- Having had a prior heat illness (moderate to severe heat exhaustion or heat stroke) puts firefighters at increased risk for repeat heat illness.

Mitigations:

- Utilize shifts, including split, to avoid crews working in the heat of the day.
- Plan for operations utilizing strategies and tactics necessary to operate during extreme temperatures, including not engaging until temperatures subside, unless absolutely necessary to protect critical values at risk.
- Consider resource type and home unit and their appropriate levels of physical exertion at the incident.
- Have resources 'shade up' after the morning hike to lower body temperature prior to beginning work for the day.
- Frequent breaks! Allowing body core temperature to normalize is important. These breaks should include:
 - o Where possible, keep vehicles close to line resources and rotate them through air conditioning.
 - o Provide iced hydration drinks whenever possible.

Golden Rules (Part 1 of 9)

These are the Golden Rules developed by Dale Carnegie will change anyone's mind positively, even by attempting them. When such change happens, it will change the life for them and hence the lives of everyone they come in touch with them. <http://www.dalecarnegie.com/>

Principles from How to Win Friends and Influence People

Become a Friendlier Person

1. Don't criticize, condemn or complain.
2. Give honest, sincere appreciation.
3. Arouse in the other person an eager want.
4. Become genuinely interested in other people.
5. Smile.
6. Remember that a person's name is to that person the sweetest and most important sound in any language.
7. Be a good listener. Encourage others to talk about themselves.
8. Talk in terms of other person's interests.
9. Make the other person feel important - and do it sincerely.

Employee Service Awards



SERVICE AWARDS FOR AUGUST

Employee's Name	Position	Location	State Service
Tonya Steadman	Administrative Coordinator	Columbia	10 years
Bobby Watts	Forest Technician	Black River Unit	10 years

Cool Plant



Coastal Carolina Spiderlily, *Hymenocallis crassifolia*, can be found in brackish marshes, swamp forest fringes, and low lying areas and bays within the coastal plain. This one was in a swampy area in Walterboro.

Spiderlilies are easy-to-grow moisture-lovers that are reliable perennial wildflowers in the garden. Spiderlilies are tough, low maintenance plants that make it perfect for rain gardens. In the wild many *Hymenocallis* (white spider- lilies) often grow in or near water or in a seasonally flooded woodland. However, most *hymenocallis* perform just as well in an average garden soil. *Hymenocallis* produce unusual white, spider-like, nocturnally fragrant flowers that are large enough to see from quite a distance.

Common American Customs Considered Offensive in Other Countries (Part 18)

MSN Business Insider

There are a number of customs and gestures that Americans use without thinking twice. But when traveling abroad, they will not only out you as a tourist, but could get you in hot water in other countries. Here are some of the most common American customs that are seen as offensive elsewhere.

18. Asking about career

Asking “what do you do” is a common American icebreaker, but is often considered insulting, especially in socialist countries like the Netherlands, where people feel that it’s a way of pigeonholing them, and of being classist. You might as well just ask someone you just met their salary.

Paper Remains the Preferred Technology for Productive Learning

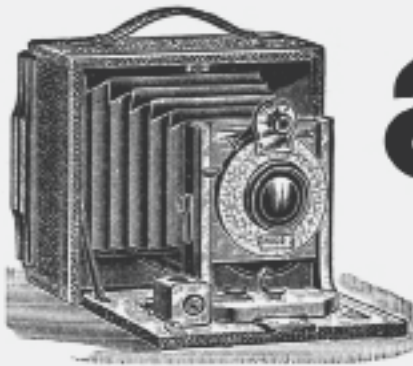
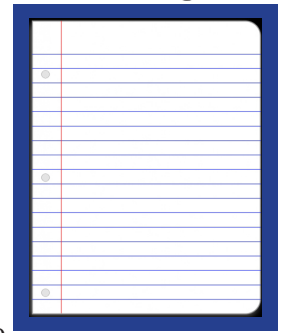
Despite technology's prominence in the 21st century, when it comes to education and productivity, students and parents still prefer the oldest technology, paper. In fact, the clear majority of parents (96 percent) feel that paper is essential to learning. The recently released, Paper and Productive Learning: The Third Annual Back-to-School Report from the Paper and Packaging Board (P+PB), reveals that 93 percent of college students and 87 percent of 7-12 grade students believe that paper is an essential part of being able to achieve their educational goals.

The Paper and Productive Learning report exclusively shares the results of a survey conducted by IPSOS, which surveyed over 1,400 students and parents in the United States. While the report notes that about 8 in 10 people (79 percent) surveyed think paper and packaging is relevant in their daily lives, findings about the value of paper in learning among millennial parents were surprising. Nearly 89 percent of millennial parents believe their child remembers assignments better when he or she writes them down on paper. 72.4 percent of them agree they have seen their child have trouble staying focused when they do homework on a computer or tablet. Fully 95 percent of millennial parents believe paper is an essential part of children being able to achieve their educational goals.

Students today, who have grown up with smartphones and tablets, actually prefer to use paper for learning, with two out of three (70 percent) 7-12 grade students preparing for tests by taking handwritten class notes. Half of students (50 percent) surveyed in grades 7 and 8 believe they best learn information by handwriting it. When it comes to exam preparation, over eight in ten (81 percent) of college students report always/often using paper tools, such as notecards, handouts, study sheets or printed lectures/slides.

To promote the mental and physical benefits reading on paper can provide P+PB will introduce a new reading program later this summer. The 15 Pages A Day program will encourage everyone to pledge to read at least 15 print pages daily to yield several potential benefits including increased language and mental development as well as improved memory.

Read and download the full Paper and Productive Learning report at <http://www.howlifeunfolds.com/paper-productive-learning-third-annual-back-school-report/>.



a Picture from our past



Berkeley/Upper Charleston Sector Forest
Technician Nate Poston with his dozer in 1989.



Nate on a fire
with (now-
retired) Cecil
Campbell in
2007.



In an email dated July 18 to Firewise Field Coordinator **Bill Wiley** from Denise Godwin of Clemson regarding his help at the Clemson Annual Safety Meeting:

Bill,

Thank You! I appreciate you sharing the many facets of safety concerning fires. Your presentation was interesting, interactive and educational. You accomplished the goals I had set for this event! I always want to educate, remind & encourage folks to be proactive!

I have attached a few pictures that were taken during the event.

If you are ever in our area again, please stop by.

Thanks again,

Denise



FOUND AROUND THE OFFICE



Several headquarters employees noticed an unusual insect hanging out near one of the back entrances on a mid-July morning. Forest Health Coordinator David Jenkins, who is an entomologist, quickly identified it as *Anisomorpha buprestoides*, aka the “two-striped walking stick.” He said it’s the first one he’s ever seen outside the state of Florida, where they are primarily found. Actually, this photo shows both the male and female of the species; the male is the smaller and lighter-colored one with a single stripe running down its back. Another of its several common names is the “musk mare,” an apt name, considering it can sometimes squirt a strong-smelling defensive spray that is painfully irritating to the eyes and mucous membranes.



Rabon Keeps It Sharp on Sand Hills

Making knives is a hobby that has been in Sand Hills State Forest (SHSF) Forest Technician AJ Rabon's family for quite some time.

His father, Joy, took up the hobby long before AJ was born and continued crafting knives until arthritis hampered his ability to make them. However, that didn't put a stop to the knife making in the family. As AJ grew older, he began to share his father's interest in the hobby and made his first knife when he was in his late 20s.

"Now that I'm older, I appreciate knives and tools and things like that," Rabon said. "I got into making knives, and it kind of got my dad back into it. He and I sort of work together. We built our own forge, and he's provided me a lot of

tools so I can do it on my own. I have my own little shop at my house."

Although he could see himself starting a business making knives when he retires, Rabon says he does it for fun now and only crafts about five knives a year.

His favorite creation is a bowie knife he made for retired SHSF Forest Technician Mickey Worthington. He forged the knife from a broken tool he found in a pile of scrap behind the SHSF shop.

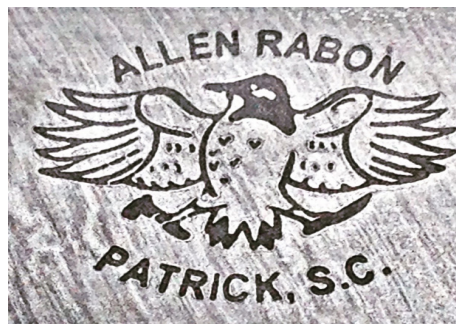
"It was an old spring from a cultivator," said Rabon, who takes anywhere from 10 to 20 hours to make a knife. "I forged it out and made it into a bowie knife. (Mickey's) wife wanted to get it for him for his birthday, so I made it for him from something from Sand Hills of all things."

While Rabon stays busy with knife making in his spare time, the more than 46,000 acres that makes up SHSF keeps him plenty busy for the Forestry Commission. Rabon has a vast array of job duties, including timber cruising, timber marking, conducting timber sales and collecting inventory data for the forest harvest schedule model.

"The thing I enjoy most about my job is getting to explore the forest because it has me going to every single part of the forest," Rabon explained. "I get to see a little bit of everything from historical sites to old home sites and things like that. I find stuff like that fascinating."



AJ's father Joy shared his hobby of knife making with AJ.



The logo that AJ puts on his work was inspired from a drawing he found at the Sand Hills office.



AJ proudly displays one of his knives.

Rabon also serves as a geographical information systems (GIS) specialist trainee on the agency's Incident Management Team (IMT). He gained valuable experience last fall when he worked with the IMT at the Pinnacle Mountain Fire in Pickens. Rabon was impressed with how personnel from so many places from across the country worked so well together.

"I noticed that no matter what part of the fire you were working on, whether it was on the fireline or in camp with the incident management team, you had to work together as a team to get anything done," Rabon said. "We always had some kind of obstacle and would work together to solve it."

Traveling out of state for wildfire details is also something Rabon enjoys, as he has helped fight wildfires in several



AJ fought fire in Idaho in 2016 on a hand crew.

states, including Colorado, Wyoming, California, Oregon and Texas.

Rabon, who grew up in Conway, studied forest management at Horry Georgetown Technical College. He served several internships during college, including one in Wyoming where he did forest inventory for the Bureau of Indian Affairs.

Rabon and his wife, Sarah, live in Patrick and have been married for four years. They have one son, Parker, who was born in February.

The couple enjoys traveling, going camping, hiking and swimming at beaches, with two of their favorites being Surfside and Cherry Grove in Horry County.

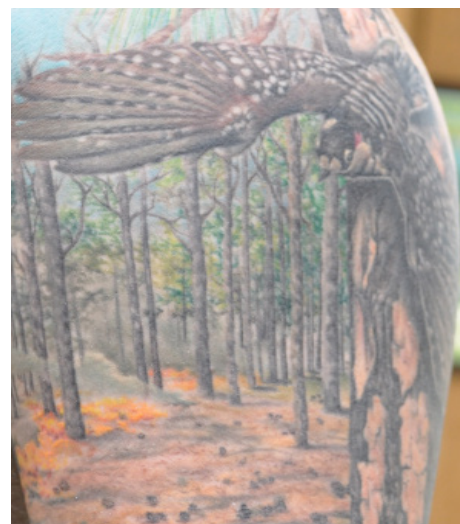
Along with making knives, Rabon loves to pass the time playing video games and collects old tools and weapons.

"Anything kind of primitive is what I'm into," he said. "I've got a wide selection



AJ was part of a crew with James Douglas at Jukes Gap Fire in North Carolina in 2011

of tools and weapons and stuff that people have given me or I've bought over the years. I've got bows and blowguns and slingshots. I have all kinds of weird stuff like that."



Talking about wearing your work on your sleeve... AJ has a full color tattoo on his left arm showing a red-cockaded woodpecker in a pine forest being prescribed-burned. The tattoo took 19 hours to ink.



AJ with wife, Sarah, and son, Parker Allen.

Comparison for 800 Calls

The number of wildfires in FY2017 was significantly higher than the previous fiscal year since FY2016 was a record low. This number is still 30+% lower than 5 to 15 years ago.

Smoke management burn notifications for F2017 were also higher than the previous fiscal year, but still 20-30% lower than 5 to 15 years ago. Call volume to the automated burn notification system was up by 24.48% compared to last fiscal year and the highest recorded except for FY2012.

With these upticks in wildfire and burn notifications from last year, the total 1-800 call volume was up 25% compared to last fiscal year with total cost also up by 19.7%.

A point to note: the agency's annual 1-800 charges were \$70-88,000 in FY2001 and FY2002. Over the years we have made numerous modifications in directing more notifications to the automated system, process improvements in the dispatch centers, new CADS software, and closer monitoring of longer calls to reduce our annual 1-800 costs to \$18-20,000 (almost an 80% reduction).

Fiscal Year	Wildfires	Smoke Management Notifications
2017	2,062	12,292

CURRENT JOB OPENINGS

Job Title: **Agency Director (State Forester)**

Closing Date/Time: 08/07/17 11:59 PM

Agency Hiring Range: Min: \$106,460.00

Max: \$125,000.00

Job Type: FTE - Full-Time

Location: Richland County, South Carolina

Normal Work Schedule: The normal work schedule is Monday-Friday (8:30-5:00). This position works a normal work schedule, but additionally works evening and weekend hours to accomplish the mission of the agency. Considerable in-state and out-of-state travel required.

JOB RESPONSIBILITIES: Serves as the Agency Director responsible for the overall direction and management of the Commission, in achieving its mission to protect, promote, enhance and nurture the forest lands of South Carolina. Responsible for ensuring the Commission's goals and objectives are accomplished and directs personnel, fiscal, and physical resources of the Commission. Assesses the State's changing forestry climate such as population growth, urban sprawl, landowner desires, environmental and green space demands, market and industry shifts and aligns resources and programs in response to these changes.

MINIMUM AND ADDITIONAL REQUIREMENTS:

A bachelor's degree in forestry from a college or university accredited by the Society of American Foresters and ten (10) to fifteen (15) years related professional forestry experience to include managerial/supervisory experience. Must be a registered forester or eligible to become registered. A high degree of skill in decision-making, problem solving, communication and strategic planning.

ADDITIONAL COMMENTS: Closing date for this position may be extended until filled. Individuals selected for interviews must provide an official college/university transcript.

Job Title: **Forestry Technician I - Chesterfield**

Closing Date/Time: 08/10/17 11:59 PM

Agency Hiring Range: Min: \$22,182.00

Max: \$23,291.00

Job Type: FTE - Full-Time

Location: Chesterfield County, South Carolina

Normal Work Schedule: This position works a 28-day/8-hour rotating schedule.

RESIDENCY REQUIREMENT: This position works in Chesterfield County/Surrounding Area.

JOB RESPONSIBILITIES: Responds to forest fire calls as required by the readiness plan. Performs forest fire duties with bulldozer tractor, hand tools and water handling equipment. Investigates fires to determine cause and gathers pertinent information to complete fire reports. Performs operator preventive maintenance on all assigned equipment and maintains equipment in a state of readiness; provides forestry services, such as firebreak plowing to landowners; assists with reforestation programs and other forestry operations.

MINIMUM AND ADDITIONAL REQUIREMENTS: A high school diploma and experience in forest fire protection duties, forestry management, operation of heavy mechanized equipment, or relevant work experience. Position requires a commercial driver's license (CDL). Candidate must pass the written CDL exam prior to employment. Must pass the agency's physical fitness test that requires a two (2) mile walk carrying a 25 lb. pack in 30 minutes. Firefighter registration with the State Fire Marshal's Office, criminal records check and drug test are required.

PREFERRED QUALIFICATIONS: Associate Degree in forestry, natural resources or other related discipline.

ADDITIONAL COMMENTS: This position covers a multi-county work zone (Chesterfield County/Surrounding Area).

LOGGING AND THE ENGLISH LANGUAGE

Some of the ways in which we describe timber harvesting go back over a hundred years. Since then, meanings for some of the words have been lost. (Part 10 of 11)

Forestry is filled with terms that are sometimes misused but fun to learn about. It's part of the jargon that all professions must deal with. Even a seemingly common measurement can be ambiguous. Take diameter, for instance. Is it the diameter at 4.5 feet (standard) or diameter at stump height? There can be a significant difference in a logging contract.

Asking people to define their terms is a good idea. Words sometimes do matter. Clarity in conversation, and especially in contracts, can go a long way to avoid misunderstanding. In some cases, this clarity can mean the difference between thousands of dollars or the quality of forest health and vigor. Yet another good reason to hire a professional forester to help manage woodlands. This article was published by Michigan State University Extension. http://msue.anr.msu.edu/news/logging_and_the_english_language

Confusingly, there's that annoying word "popple." To a logger, this means quaking and bigtooth aspen. Most foresters shy away from the term because of its ambiguity, except when talking to loggers. And then, popple sounds a lot like poplar. Poplar might include additional species, such as balsam poplar, tulip poplar, and white poplar. Common names for living things is why Carl Linna invented scientific names based on Latin.

Human Resources

Have you heard about Blue CareOnDemand?

Blue CareOnDemand is a faster, easier way to connect with health care professionals. Employees can use this service to connect with U.S. board-certified physicians and other health care professionals 24/7, 365 days a year, from your computer or smartphone. This feature is available to State Health Plan primary members (Standard and Savings Plans) age 18 and older. Dependent children under age 18 can also use this benefit with an adult member.

An employee's copayment, deductible and coinsurance will be processed the same as it is for a normal office visit for State Health Plan (Standard and Savings Plans) primary members. If a physician feels the member needs to visit a primary care physician or urgent care, the incurred expenses will be reversed.

This video visit option is covered as a traditional office visit under each Plan. For example, if you have the Standard Plan, a visit before you meet your deductible can total \$59, and after you meet your deductible your visit can be as low as \$21.40. Please note that Blue CareOnDemand is the only video visit option covered by the State Health Plan. Medicare does not cover virtual visits, so members enrolled in the Medicare Supplemental Plan are not eligible for this service.

Blue CareOnDemand is a great solution when: you need to see a doctor, but can't fit it into your schedule; your doctor's office is closed; you feel too sick to drive; you have children at home and don't want to bring them with you; you're a college student away from home; you're traveling.

Doctors can treat many common health conditions through video visits, including: cold and flu symptoms; bronchitis and other respiratory infections; sinus problems; pinkeye; ear infections; allergies; migraines; rashes and other skin irritations; and, other common health conditions. Blue CareOnDemand doctors can even write prescriptions, when needed, according to state regulations.

There are two easy ways to use this service – from your computer, visit www.BlueCareOnDemandSC.com or from your mobile device, download the free app for your Apple or Android device. Please note, Blue CareOnDemand is only available through the app when using your mobile device.

Members age 18 and older must create their own Blue CareOnDemand account; however, dependents younger than 18 must use the primary subscriber's account. For questions, call the number on the back of your State Health Plan membership ID card.

Human Resources

- Lynn Rivers



August Payroll Reflects New Retirement Rates

The August 1 payroll will reflect the new retirement rates for employee withholdings. Below is a recap of the various new rate changes. Please pass this information to employees who do not have an assigned agency email address. Thank you.

Member contributions:

Retirement plan	Member contribution rate
SCRS	9.00% of earnable compensation
State ORP	9.00% of earnable compensation
PORS	9.75% of earnable compensation

Fire Weather Outlook

Fire activity across the West increased significantly as preexisting dry conditions along with record-setting heat events allowed for the fuels to become critically dry across portions of the Southwest, southern Great Basin, and Southern California. The fire season in Georgia and Florida diminished as multiple wetting rain events relieved the preexisting drought conditions.

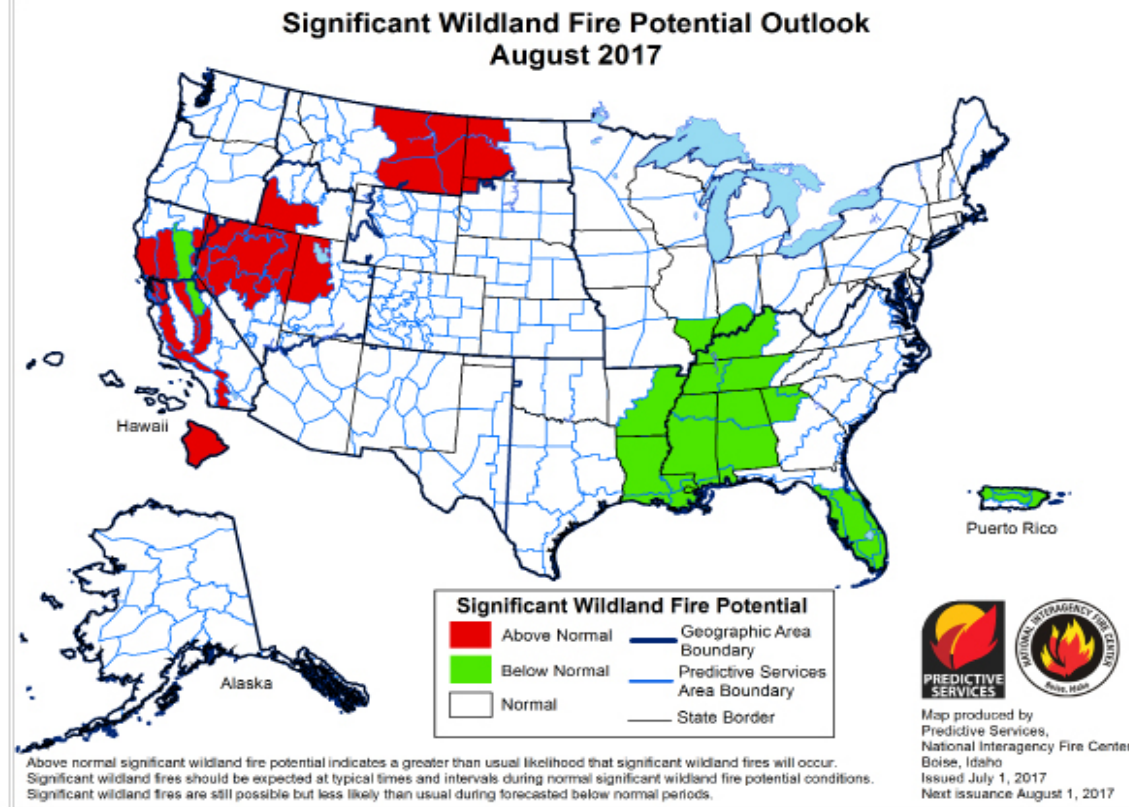
The southwestern states have been drier and more continuously warm than average for several months making fuels more receptive to fire activity. The eastern U.S. been largely milder than average as several frontal systems produced significant rainfall.

Above average temperatures will continue across Alaska from July into September as overall as dry conditions persist over much of the state due to recurring areas of high pressure systems moving across the state. The seasonal transition in late September and October should feature a return to average conditions for both temperatures and precipitation

Across the remainder of the country, expect overall warmer than average conditions to persist into September with the highest possibility for heat events being in July and August across western portions of the Southwest and California. Due to the observed progressive nature of the current season, heat events may be of shorter duration than what is typically observed and could suggest It could also suggest that the onset of the southwestern monsoon might be slightly delayed. A higher frequency of breezy conditions across central portions of the West is also possible. Available data suggests that near average precipitation is expected across most of the West in July and August followed by a transition to slightly wetter than average conditions for September and October.

Southern Area: Below Normal significant large fire potential is expected across a majority of the region in August except eastern Texas and Oklahoma and portions of Virginia, the Carolinas, Georgia, and northern-central Florida. For September and October, Normal significant large fire potential is expected except across Kentucky, Tennessee, Northern Mississippi, and Southern Texas.

Humid conditions are expected for the South for the next four months along with a more active storm pattern. With elevated moisture available for fuels, the risks for large fire activity should be minimized. Initial attack should be effective when weather events in areas with receptive fuels arise.



Current Fire Numbers for South Carolina

MONTH AND YEAR TO DATE COMPARISON TO PREVIOUS 5 AND 10-YEAR AVERAGE

Time Period	JULY		FISCAL YEAR	
	FIRES	ACRES	FIRES	ACRES
5 Year Average	118	697	1,620	11,492
10 Year Average	141	890	2,070	15,791
Current FY ¹	26	50	26	50

¹To date for current fiscal year

TALES IN SONG

*And we'll talk of trails we walked up
Far above the timber line
There are nights I only feel right
With Carolina in the pines*

Song: "Carolina in the Pines"

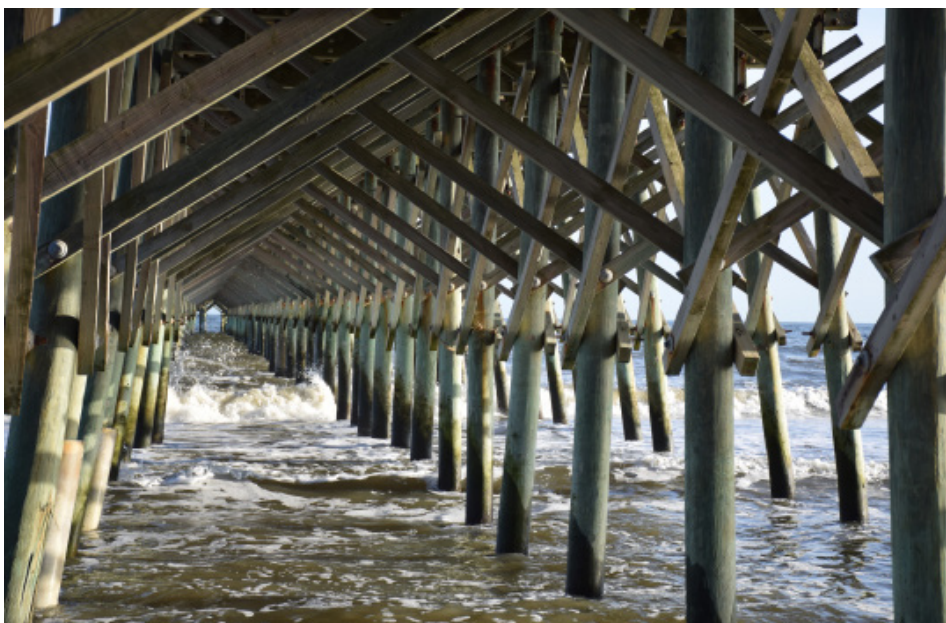
Artist: Michael Martin Murphey

Released: 1975

Listen: <https://www.youtube.com/watch?v=c3J1J61VsYM>

Can you think of a song with
tree- or forestry-related lyrics?
Let us know, and we'll share it
with everyone.

Photo of the Month



This photo was taken under the pier at Folly Beach. Forest products can be found almost everywhere.



Quote of the Month

*"Between every two
pines is a doorway to
a new world."*

John Muir

Please send in your
photos or news to
Michelle Johnson at
mjohnson@scfc.gov.